

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 1. (Previously Presented) A method for generating a spot for use in
2 halftoning, comprising:

3 defining a spot function that combines two functions selected to provide

4 asymmetrically changing of the shape of a spot for use in a halftone cell;

5 scaling the spot function according to grayscale levels using a parameterized spot

6 radius scaling function that varies according to a value of a first and second spot function

ordinate and an asymmetric shape changing scaling function based on a gray level for the

8 spot, and

9 printing using the scaled spot function;

10 wherein the spot function is described by:

$$f(x, y) = \frac{1}{2} \left(\cos(\pi x / p_x) + \frac{1}{S(p, r)} \cos(\pi y / p_y) \right)$$

12 where x and y are the first and second spot function ordinates, p_x scales ordinate x , p_y scales

ordinate y , p is a spot shape parameter for controlling the shape of the spot, $S(p,r)$ is a scaling

14 function, and r is the radius of the spot.

1 2. (Previously Presented) The method of claim 1, wherein the two

2 functions allow non-separable changes in spot shape.

1 3. (Canceled)

1 4. (Canceled) .

4 where p_m sets a maximum ellipticity of the spot.

3

1 17. (Previously Presented) A program storage medium readable by a
2 computer, the medium tangibly embodying one or more programs of instructions executable
3 by the computer to perform halftoning an image by:

4 defining a spot function that combines two functions selected to provide
5 asymmetrically changing of the shape of a spot for use in a halftone cell;

6 scaling the spot function according to grayscale level using a parameterized spot
7 radius scaling function that varies according to a value of a first and second spot function
8 ordinate and an asymmetric shape changing scaling function based on a gray level for the
9 spot, and

10 printing using the scaled spot function;

11 wherein the spot function is described by:

$$f(x, y) = \frac{1}{2} \left(\cos(\pi x / p_x) + \frac{1}{S(p, r)} \cos(\pi y / p_y) \right)$$

13 where x and y are the first and second spot function ordinates, p_x scales ordinate x , p_y scales
14 ordinate y , p is a spot shape parameter for controlling the shape of the spot, $S(p,r)$ is a scaling
15 function, and r is the radius of the spot.

1 18. (Currently Amended) The program storage ~~device~~ medium of claim 17,
2 wherein the two functions allow non-separable changes in spot shape.

1 19. (Canceled)

1 20. (Canceled)

23. (Previously Presented) A printing system, comprising:

means for receiving a print file and processing the print file for printing;

means for conveying a print job according to the print file; and

means for generating a spot for use in halftoning wherein the halftoning reproduces an image defined by the print file using the print head, the means for generating a spot defines a spot function that combines two functions selected to provide asymmetrically changing of the shape of a spot for use in a halftone cell and scales the spot function according to grayscale level using a parameterized spot radius scaling function that varies according to a value of a first and second spot function ordinate and an asymmetric shape changing scaling function based on a gray level for the spot,

wherein the spot function is described by:

$$f(x, y) = \frac{1}{2} \left(\cos(\pi x / p_x) + \frac{1}{S(p, r)} \cos(\pi y / p_y) \right)$$

where x and y are the first and second spot function ordinates, p_x scales ordinate x, p_y scales ordinate y, p is a spot shape parameter for controlling the shape of the spot, S(p,r) is a scaling function, and r is the radius of the spot.